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FEB 10 2006

Total Number of Pages in This Submission

Application Number	10/079,737
Filing Date	February 21, 2002
First Named Inventor	De et al.
Art Unit	2661
Examiner Name	Robert W. Wilson

Attorney Docket Number

I-2-0173.12US

**ENCLOSURES (Check all that apply)**

- Fee Transmittal Form
  - Fee Attached
- Amendment/Reply
  - After Final
  - Affidavits/declaration(s)
- Extension of Time Request
- Express Abandonment Request
- Supplemental Information Disclosure Statement
- Certified Copy of Priority Document(s)
- Response to Missing Parts/ Incomplete Application
- Response to Missing Parts under 37 CFR 1.52 or 1.53

- Drawing(s)
- Licensing-related Papers
- Petition
- Petition to Convert to a Provisional Application
- Power of Attorney, Revocation
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- After Allowance communication to Technology Center (TC)
- Appeal Communication to Board of Appeals and Interferences
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- Proprietary Information
- Status Letter
- Other Enclosure(s) (please Identify below):

Form PTO-1449

Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm or Individual name	Michael L. Berman Volpe and Koenig, P.C.	Reg. No. 51,464
Signature		
Date	February 8, 2006	

**CERTIFICATE OF TRANSMISSION/MAILING**

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Typed or printed name	Michael L. Berman
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This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PATENT

In the **PATENT APPLICATION** of:

De et al.

**Application No.:** 10/079,737

Our File: I-2-0173.12US

**Confirmation No.:** 8052

Date: February 8, 2006

**Filed:** February 21, 2002

For: SINGLE USER DETECTION USER  
EQUIPMENT

Group: 2661

Examiner: Robert W. Wilson

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
INCLUDING RULE 1.704(d) STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Further to Applicants' Duty of Disclosure pursuant to 37 C.F.R. §1.56, Applicants wish to bring to the Examiner's attention the material cited on the enclosed PTO-1449 form. Newly cited documents are indicated by an asterisk (\*).

Pursuant to 37 C.F.R. §1.98(a)(2)(ii), copies of the newly cited U.S. publications and/or patent documents have not been included.

In the spirit of Rule 1.704(d), the undersigned certifies that each newly cited item of information contained in this Supplemental Information Disclosure Statement was cited in a communication in a counterpart U.S. application, and that this communication was not received by any individual designated in §1.56(c) more than

**Applicant:** De et al.  
**Application No.:** 10/079,737

thirty (30) days prior to the filing of the supplemental information disclosure statement.

It is respectfully requested that the Examiner consider these documents and return an initialed copy of the PTO-1449 form indicating his/her consideration of the cited materials.

Respectfully submitted,

De et al.

By M. Berman  
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MLB/ks  
Enclosure

 <b>FEB. 10 2006 FORM PTO-1449</b> <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b> <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)		ATTY. DOCKET NO. I-2-0173.12US	SERIAL NO. 10/079,737
		<b>APPLICANT</b> De et al.	
		FILING DATE February 21, 2002	GROUP 2661

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
*		5,157,688	10/1992	Dell-Imagine			
		5,337,226	12/1994	Davis			
		5,377,225	12/1994	Davis			
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		5,648,983	07/1997	Kostic et al.			
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*		2002/0131383	09/2002	De et al.			
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*		2002/0141366	10/2002	De et al.			
*		2002/0141372	10/2002	De et al.			
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*		2002/0154619	10/2002	De et al.			
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*		2002/0159428	10/2002	De et al.			

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

		Ramjee Prasad, Werner Mohr and Walter Konhauser editors, <i>Third Generation Mobile Communication Systems</i> , Artech House, Boston, 2000.
		Anja Klein, Ghassan Kawas Kaleh and Paul Walter Baier, "Zero Forcing and Minimum Mean-Square Error Equalization for Multiuser Detection in Code-Division Multiple-Access Channels", <i>IEEE Trans. on Vehicular Technology</i> , Vol.45, No. 2, pp. 276-287, May 1996.
		Naja Klein, "Data Detection Algorithms Specially Designed for the Downlink of CDMA Mobile Radio Systems", <i>IEEE 47th Vehicular Technology Conference</i> , pp. 203-207, May 1997.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)		ATTY. DOCKET NO. I-2-0173.12US	SERIAL NO. 10/079,737
		APPLICANT De et al.	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
		H.R. Karimi and N.W. Anderson, "A Novel and Efficient Solution to Block-Based Joint-Detection using Approximate Cholesky Factorization", <i>Personal, Indoor and Mobile Communications PIMRC' 98</i> , Conference Proceedings, Vol. 3, pp. 1340-1345, Sept. 1998, Boston, MA.	
		ETSI STC SMG2 Layer 1 Expert Group, "Low Cost MMSE-BLE-SD Algorithm for UTRA TDD Mode Downline", Tdoc SMG2 UMTS L1, Helsinki, Finland, Sept. 1998.	
		3G TS 25.102 V3.4.0, 2000-10, "UTRA (TDD) Radio Transmission and Reception", 3rd Generation Partnership Project, Technical Specification Group RAN WG4, Annex B., pp. 37.	
		Lang Tong; Guanghan xu; Kailath T: "Blind identification and equalization based on second -order statistics: a time domain approach", IEEE Trans. Inf. Theory (USA), IEEE Transactions on Information Theory, March 1994, USA, ISSN 0018-9448, VOL-40, NR 2, pages 340-349	
		Benvenuto N. et al. "Joint Detection With Low Computational Complexity For Hybrid TD-CDMA Systems" VTC 1999-Fall. IEEE VTS 50th. Vehicular Technology Conference. Gateway to the 21st Century Communications Village. Amsterdam, Sept. 19-22, 1999, IEEE Vehicular Technology Conference, NY	
		Vandaele P. et al. "Recursive Total Least Squares Algorithm for Single-User Blind Channel Equalisation: IEE Proceedings: Vision, Image and Signal Processing, Institution of Electrical Engineers, FB, Vol 147, No. 3, 23 June 2000	
		Yang et al., "Fast Joint Detection with Cyclic Reduction Exploiting Displacement Structures", 2000 IEEE International Conference on Acoustics, Speech and Signal Processing, Istanbul, Turkey, June 2000	
		Proakis et al., "Digital Signal Processing", Macmillan Publishing Company, New York, NY, 1992, p. 835, para. 11.3.1, p. 890, para. 12.3.2	
		Vollmer et al., "Joint-Detection Using Fast Fourier Transforms in TD-CDMA Based Mobile Radio Systems", International Annual Conference of ICT, 1999, pp. 1-7, p. 1, para. 1, p. 2, para. II, p. 3, para. III, p. 4, para. IV.	
		Pigeonnat, "Alternative Solutions for Joint Detection in TD/CDMA Multiple Access Scheme for UMTS", IEEE Signal Processing Workshop on Signal Processing Advances in Wireless Communications, May 1999, pp. 329-332, p. 329, para. 2.	

EXAMINER	DATE CONSIDERED
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